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ABSTRACT

The Army's Basic Skills Education Program (BSEP) was studied to consider whether it was properly designed to determine the basic skills needed in Army jobs and to be effectively implemented. Information and reports on BSEP were reviewed, and three major commands were selected for evaluation. In designing the program, the Army did not identify the basic skills required for each military job and, instead, devised blanket literacy levels. To remediate this problem, the Army awarded contracts to relate grade-level requirements to job performance. BSEP has not been effective in alleviating soldiers' deficiencies in basic skills due to the lack of centralized management and the lack of program evaluations. Studies have shown that short-term remedial programs do not provide the competency needed to master highly technical material in many Army jobs, and substantial resources would be required to bridge the literacy gap. Recommendations were that the Secretary of the Army should defer renewal of all contracts for basic skills education at installations until the program is revised, offer basic skills education only during off-duty hours, define the basic skills required for each military job, and determine whether the desired skills are attainable. (YLB)

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BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Secretary Of The Army

Poor Design And Management Hamper Army's Basic Skills Education Program

The Army has spent nearly $160 million since 1979 on its basic skills education program. The program has helped a small percentage of soldiers improve their basic skills--primarily reading and math skills. GAO found that the Army has not related basic skill objectives to job performance nor has it made sure that all installations consistently operate the program.

Educators and others doubt that short-term remedial programs--like the Army's--can effectively counter deficiencies in basic skills. The Army has taken some actions to address the problems. GAO recommends several ways the Army can further improve its basic skills education program.

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

B-211739

The Honorable John O. Marsh, Jr.
The Secretary of the Army

Attention: The Inspector General
DAIG-AI

Dear Mr. Secretary:

This report discusses the Army's basic skills education program and whether the program (1) was properly designed to determine the basic skills needed to do Army jobs and (2) is being effectively implemented at initial entry training bases and permanent duty stations.

The report contains recommendations to you on pages 22 and 23. As you know, 31 U.S.C. 720 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report. A written statement must also be submitted to the House and Senate Committees on Appropriations with an agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Secretary of Defense; the Director, Office of Management and Budget; and the Chairmen, House and Senate Committees on Appropriations and on Armed Services, House Committee on Government Operations, and Senate Committee on Governmental Affairs.

Sincerely yours,

Frank C. Conahan
for Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY OF
THE ARMY

POOR DESIGN AND MANAGEMENT HAMPER ARMY'S BASIC SKILLS EDUCATION PROGRAM

D I G E S T

The Army's basic skills education program is intended to provide remedial training to Army recruits with reading and mathematics abilities below the ninth grade level, ranging as low as the fourth grade level. Although the program is intended to help these recruits improve their job performance, GAO found that after 4 years and $160 million in expenditures, a small percentage of soldiers has achieved the Army's prescribed goals. GAO found examples of program abuse, including allowing ineligible soldiers--those who scored high on screening tests--to participate, and allowing soldiers to obtain high school equivalency certificates during on-duty hours.

In designing the program, the Army did not identify the basic skills required for each military job. Instead, the Army devised blanket literacy levels for all jobs--fifth grade level for personnel at initial entry training bases and ninth grade level for those at permanent duty stations. The Army did not relate its requirements to soldiers' ability to perform jobs. (See pp. 7 to 9.)

Implementation problems also have hampered the program. Course hours, duration, and costs differ widely. Because commanders have discretionary authority regarding program participation, remedial training may flourish at some installations, but not at others, depending on how commanders emphasize the program. (See pp. 10 to 15.)

Also, the Army has not evaluated the overall effectiveness of its program. Army regulations assigned evaluation responsibilities to the Army Adjutant General's Office and directed that installation commanders keep data on program quality and effectiveness. Because of a lack of data and inconsistent data bases, the Adjutant General's Office could not determine how much the program has enabled participants to achieve grade levels established by the Army and, thus, improve their job performance. (See p. 15.)

Tear Sheet

In the fall of 1979, the Army established an evaluation and services division in its Education Directorate to monitor and evaluate the basic skills education program. Assessment efforts were just beginning during GAO's review. (See p. 15.)

Studies show that short-term remedial programs do not provide the competency needed to master highly technical material in many Army jobs and that substantial resources would be required to bridge the literacy gap. (See pp. 19 to 22.)

The Army recognizes some of the problems besetting its basic skills education program and has awarded contracts to relate grade level requirements to job performance. These efforts may be curtailed, however, given the current fiscal austerity. GAO believes, therefore, that it is important for the Army first to identify the basic skills required for each military job and then revise its program to provide training for those skills.

RECOMMENDATIONS

The Secretary of the Army should

--defer renewals of all contracts for basic skills education at installations until the program is revised;

--where feasible, offer basic skills education being given under current contracts only during off-duty hours;

--clearly define the specific basic skills required to do each military job; and

--determine whether the desired skills are attainable, given expected time and resource constraints and the expected reading and math skills of future Army recruits.

If the skills are attainable, the Secretary should

--develop a program which raises soldiers' basic levels to meet job needs;

--centralize management so that all installations are operating the program in the same manner;

--require and provide training only for those who need basic skills education to perform Army jobs; and

--establish a monitoring system to track, measure, and report program effectiveness.

- - - -

GAO made this review primarily to determine whether the basic skills education program was properly designed and whether it has helped soldiers with literacy deficiencies acquire adequate reading and math skills.

AGENCY COMMENTS AND GAO'S EVALUATION

On April 27, 1983, GAO met with Department of Defense and Army officials to discuss their comments on the draft report. The Army agreed with certain findings, conclusions, and recommendations. It provided some technical and factual corrections, as well as specific comments concerning the findings reported, which GAO has incorporated throughout the report.

The Army did not agree with the recommendation to defer renewal of all contracts until the program is revised. (See p. 23.) The Army said that it recognized the general literacy curriculum needed to be revised and that it has taken numerous steps to change the program into a job-related, competency-based curriculum. According to the Army, deferring renewal of all contracts might well stop local efforts to revise the program, including demonstrating that basic skills instruction is job oriented. There is no evidence that efforts to revise the program would stop if contract renewals were deferred and, in GAO's opinion, deferral should provide an even greater incentive to develop an effective program.

The Army also did not agree with GAO's recommendation that, where feasible, it offer basic skills education under current contracts only during off-duty hours. The Army commented that its current efforts to design contracts where

instruction is to be job-related meets the Congress' requirements for on-duty training.

GAO believes that Army actions to adhere to congressional intent will require close monitoring and evaluation if the Army is to stop the misuse that has been prevalent in recent years, and which GAO observed during its visits to Army installations.

The Army agreed with the remaining recommendations and provided a list of actions to improve the basic skills education program. (See p. 24.)

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ABBREVIATIONS

BSEP	basic skills education program
DOD	Department of Defense
FORSCOM	U.S. Forces Command
GAO	General Accounting Office
TRADOC	Army Training and Doctrine Command

CHAPTER 1

INTRODUCTION

A 1975 U.S. Office of Education [1]/ study disclosed that 20 percent of the American adult population lacked the basic communication and computational skills to effectively cope with everyday life. Studies have shown that this problem carries over to the military services, especially the Army. For example, a Department of Defense (DOD) study [2]/ issued in March 1982 showed that Army recruits more so than recruits in the other services, tended to come disproportionately from the segment of the American population lacking essential basic skills.

The Army's basic skills problem may be compounded in coming years due to the decreasing availability of 17- through 19-year-old males, as depicted by the graph on the next page. These individuals comprise the majority of the Army's personnel strength.

EXTENT OF BASIC SKILLS GAP

In recent years, the Congress has expressed concern over the increasing numbers of recruits the Army has been accepting from the lowest mental aptitude level--category IV--since all-volunteer recruiting began in 1972. Individuals in this category have reading and mathematics abilities below the ninth grade level, ranging as low as the fourth grade level. In 1975, the Army enlisted 10 percent of its nonprior service male members from this category. The rate of category IV recruits increased to 50 percent in 1980--more than double the 23 percent category IV youth population in the United States for the same year--and then decreased to 31 percent during 1981, due primarily to improved enlistment standards and a good recruiting market. The Army reported that, as of the end of fiscal year 1981, 45 percent, or over 305,000, of its enlisted population had reading and mathematics abilities below the ninth grade level, ranging as low as the fourth grade level. The following table shows the extent of the Army's basic skills problem.

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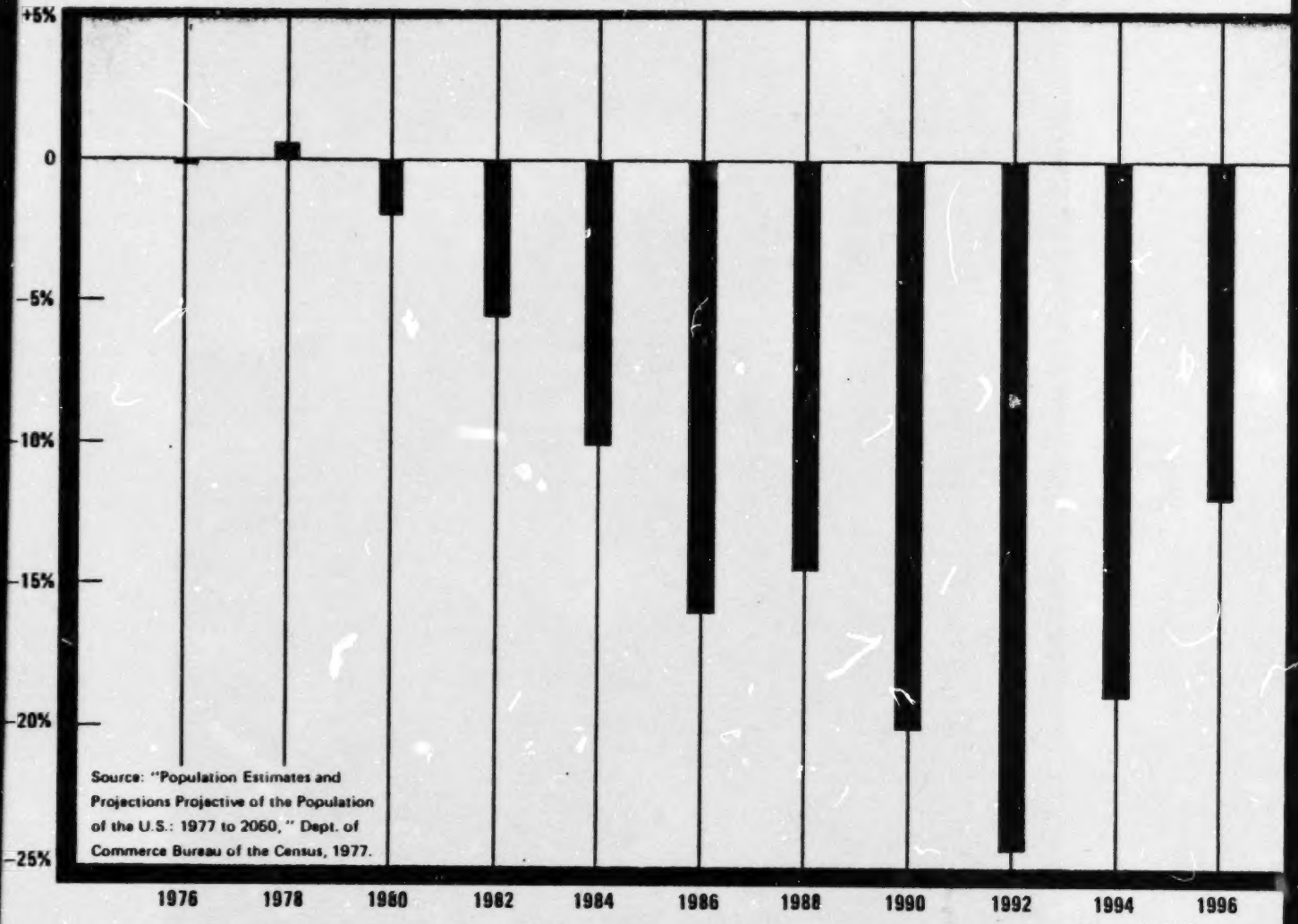
[1]/In 1975, this office--now the Department of Education--was part of the Department of Health, Education, and Welfare.

[2]/"Profile of American Youth," 1980 Nationwide Administration of the Armed Services Vocational Aptitude Battery, Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics).

PERCENTAGE CHANGE IN MALE POPULATION FROM 1976 TO 1996 (17-to 19-YEAR-OLDS)



Mental category	Grade level equivalent (note a)	Enlisted personnel Number	Percent
I	b/12.5 and up	18,690	2.8
II	10.1 - 12.4	112,143	16.6
III A	8.8 - 10.0	114,018	16.9
III B	7.5 - 8.7	223,236	33.1
IV	5.0 - 7.4	82,098	12.2
Unknown		124,562	18.5
Total		674,747	c/100.0

a/Grade level equivalent indicates the academic grade level and month at which the individual is reading. For example, a 12.5 means the person reads at a level comparable to one who is in the 5th month of the 12th grade.

b/Grade level conversion based on TRADOC validation.

c/Does not add to 100 due to rounding.

BASIC SKILLS EDUCATION IN THE ARMY

The Army has used various training programs to teach soldiers basic skills. The focus is now shifting from general literacy to basic skills required by jobs, which is congruent with congressional intent.

From 1971 to 1977, the Army had several remedial programs, including an on-duty program which helped participants obtain high school diplomas or equivalent certificates. In comments during the fiscal year 1978 DOD budget review, the House and Senate Committees on Appropriations expressed concern that on-duty, high school completion programs took personnel away from needed military training and helped to degrade readiness and morale.

The committees directed the services to offer, on duty, only those basic skills programs designed to improve soldiers' job performance through remedial training; all high school completion programs would be conducted off duty. In response

to congressional concerns, the Army established the basic skills education program (BSEP) in October 1978 to help close the gap between job demands and a soldier's proficiency in basic skills. The Army views basic skills as reading, writing, speaking, listening, and computing essential for enhancing a soldier's performance and career.

BSEP consists of four parts:

1. BSEP I is for soldiers who score below the fifth grade level on screening tests at initial entry training stations.

2. BSEP II is for soldiers in pay grades E1 through E5 who score below the ninth grade level in one or more of the basic communication or computational skills at permanent duty stations.

3. The advanced skills education program is for noncommissioned officers in pay grades E4 and above and is designed to help the officers meet their training responsibilities as supervisors, managers, and communicators.

4. English as a Second Language instruction is for soldiers at both initial entry training bases and permanent duty stations whose native language is not English and who score below 70 on the English Comprehension Level Test.

BSEP courses generally consist of 50 to 240 hours of instruction and last from 3 to 12 weeks. The Army contracts out for BSEP instruction, using regionally or nationally accredited schools, or, in some cases, "nonpersonal services contract" instructors who are certified by the State in the required curriculum. Program enrollments and costs from fiscal years 1979 to 1981 are shown below.

Fiscal year	Course enrollments (note a)	Contract instructional costs	Total costs (note b)
1979	126,639	$11,048	$ 45,057
1980	159,176	12,893	55,639
1981	174,733	10,924	57,848
Total	460,548	$34,865	$158,544

a/Course enrollments may differ from the number of participants because participants are allowed to enroll in more than one course.

b/Total costs also include student salaries but do not include costs for (1) subsistence and benefits for enrollees, (2) military instructors, (3) military and civilian personnel who manage the programs at headquarters and training commands, and (4) research and development costs associated with developing and studying basic skills programs.

OBJECTIVES, SCOPE, AND METHODOLOGY

Our objectives were to determine whether BSEP I and II were

--properly designed to determine the basic skills needed to do Army jobs and

--being effectively implemented at initial entry training bases and permanent duty stations.

We did not review the advanced skills education program because it was just getting underway during our review and results were unavailable. Nor did we review English as a Second Language instruction because participants in this part of the program constitute less than 10 percent of total BSEP enrollees.

We focused our review on the Army because nearly 75 percent of the funds approved from fiscal years 1979 to 1981 were for the Army's BSEP.

At Army Headquarters in Washington, D.C., we obtained information on BSEP policy, design, implementation, and evaluation. At the Army Research Institute in Alexandria, Virginia, and the Training Development Institute at Fort Monroe, Virginia, we examined planned research and development efforts concerning remedial education. We discussed a 1977 [3]/ report of DOD's basic skills programs with representatives from the Office of the Assistant Secretary of Defense. Additionally, we obtained information on adult literacy research from the Human Resources Research Organization, a private firm; the Air Force's Human Resources Laboratory; and the Navy's Training Analysis and Evaluation Group. We also contacted the Defense Audit Service concerning its efforts in the literacy area.

To evaluate specific BSEP operations and results, we selected 3 of the Army's 13 major commands. These three commands constituted 91 percent of the total BSEP expenditures from fiscal years 1979 to 1981. Two of the three commands were in the United States: U.S. Forces Command (FORSCOM) and the Training and Doctrine Command (TRADOC). The four installations (initial entry training bases and permanent duty stations) we chose under FORSCOM represented 61 percent of total BSEP costs from fiscal years 1979 to 1981. Under TRADOC, the four installations chosen represented 52 percent of total BSEP costs. We selected three of seven commands under the European command. Because of the many installations in Europe, we then selected eight installations in the three commands which represented 30 percent of

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[3]/"A Need to Address Illiteracy Problems in the Military Service" (FPCD-77-13, Mar. 31, 1977).

total BSEP costs in Europe from fiscal years 1979 to 1981. In total, we visited 16 Army installations in the United States and Europe (see app. II).

At the installations, we discussed the merits of BSEP with Education Service Office officials, instructors, unit commanders, and noncommissioned officers. Our review generally covered the first 3 years of BSEP operation--fiscal years 1979 through 1981. To better evaluate BSEP's effectiveness, we analyzed eligibility, enrollment, attendance, and testing data for soldiers completing BSEP at 11 of the 16 installations during the 4th quarter of fiscal year 1981. Our results are not projectable Army-wide because the many and varied sites where BSEP training is conducted prevented us from using statistical sampling techniques.

We conducted this review from October 1981 to July 1982 in accordance with generally accepted Government audit standards.

CHAPTER 2

BSEP WAS IMPROPERLY DESIGNED

The Army is spending millions each year on BSEP without having adequately determined the level of basic skills actually required for each military job. Instead, the Army, in designing the program, devised blanket literacy levels for all jobs--fifth grade level for soldiers at initial entry training bases and ninth grade level for soldiers at permanent duty stations. Recognizing problems with its basic skills instruction, the Army has taken steps to improve BSEP.

BASIC SKILLS REQUIRED TO DO JOBS WERE NOT IDENTIFIED

The Human Resources Research Organization, in critiquing BSEP in January 1982, [4/] said that, in general, the program had not been developed to relate directly to skills required for successful job and training performance and did not appear to recognize the differences in types and levels of skills demanded by such requirements. We also found this to be true during our review. In designing BSEP, the Army did not relate its grade level requirements to soldiers' ability to perform jobs.

In establishing a fifth grade level objective for soldiers at initial entry training bases, the Army accepted the United Nations' definition that anyone below the fifth month of the fifth grade level is functionally illiterate; thus, the Army considered the fifth grade level as the minimum skill level required for doing repetitive tasks during basic military training.

The Army based its ninth grade level objective for soldiers at permanent duty stations on an analysis of reading materials applicable to 95 entry-level jobs. These reading materials, which consisted primarily of soldiers' manuals, field manuals, technical manuals, and Army regulations, were analyzed by students as part of another Army training program. Army officials told us this student analysis considered both reading and math requirements for the 95 jobs. The students said the material ranged from the 9th grade level to above the 12th grade level. TRADOC, however, never approved this analysis. Nevertheless, Army officials stated that the student analysis, although imperfect, was a first step to identifying the basic skills required to do jobs.

4/"Instructional Systems Design for the Army's On-Duty Education Program," Human Resources Research Organization, Alexandria, Va., Draft (Jan. 1982, pp. 10 and 11).

At an April 27, 1983, meeting, DOD officials agreed that BSEP had been improperly designed. They commented that the results of an Army research contract in 1981 with the Human Resources Research Organization has become the foundation for a current contract with Florida State University to develop a job skill education program statement of work, which will replace BSEP II in fiscal year 1986.

ARMY EFFORTS TO ADDRESS PROBLEMS

Army officials have shown an interest in improving the quality of instruction at initial entry training bases and permanent duty stations, as evidenced by planned expenditures of $55 million during the 1980s on a research and development effort to revise existing BSEP curriculum and teaching methods.

As part of this overall effort, the Army has awarded three research and development contracts, totaling $3.3 million, to develop prerequisite basic skills competencies for 98 entry-level jobs.

The three contracts also provide for developing diagnostic testing instruments to determine how many hours of instruction it would take for an individual to achieve basic skills competency. A fourth contract was awarded for $3 million to track and evaluate the results of remedial training for those individuals in the 98 jobs. Additional contracts will be awarded as necessary for further curriculum development.

Army officials from the Education Directorate of the Army Adjutant General's Office view this research and development effort as the vehicle that will define the competencies needed to do Army jobs and provide the basis for teaching the required basic skills. However, the project may be pared by austere budget cuts.

In addition to its planned research and development efforts, the Army has taken other actions intended to help narrow the literacy gap. These actions include (1) reducing the complexity of written materials used in the military to make them easier to read, understand, and follow and (2) tightening the entrance eligibility standards for enlistment. In fact, officials told us that the Army accepted only high school graduates during fiscal year 1982, unless nongraduates obtained a high score on qualification tests. Nevertheless, while over 76 percent of the nonprior service recruits in the first 3 months of 1982 were high school graduates, 54 percent of these recruits scored below the ninth grade level in reading and mathematics on screening tests. Consequently, the high school diploma does not necessarily mean that soldiers will have the basic skills required to do jobs or to achieve the grade levels established by the Army.

In commenting on the current focus of BSEP in the Army, DOD officials stated that the Army's initial efforts to develop a functional, military-oriented curriculum were decentralized to allow development by the Army installations and educational institutions and proved to be ineffective. Current efforts are underway to identify requirements, assess competencies, and develop a functional curriculum to be implemented Army-wide.

CHAPTER 3

BSEP ACHIEVES LITTLE SUCCESS IN REDUCING LITERACY GAP

BSEP has not been effective in alleviating soldiers' deficiencies in basic skills. One cause has been the lack of centralized management, which has led to differences in training costs per student, course lengths, participation, and the type of instruction being provided to soldiers. Another contributing cause is the lack of program evaluations, which prevents the Army from knowing whether its program alleviates deficiencies in basic skills.

As a result, the success rates for participants have been low. In addition, the program is being used for purposes other than intended, such as

--allowing soldiers to complete high school (despite congressional direction that such instruction be conducted during off-duty time) and

--allowing soldiers who scored high on screening tests before entering the Army to participate in the program, even though the soldiers are not eligible.

LACK OF CENTRALIZED MANAGEMENT

The Army has not made sure that its installations are operating BSEP in the same manner. BSEP hours, duration, and costs differ widely among installations. In addition, soldiers who are eligible for remedial training may not be participating in the program because there is no Army policy that requires commanders to send soldiers to BSEP. Furthermore, decentralized management of BSEP has resulted in most installations offering general literacy rather than job-related courses.

The following table shows the wide difference in BSEP operations and costs at the eight stateside installations we visited.

Installation	Number of scheduled training Hours	Weeks	Unit contract costs
Fort Benning, Georgia	60	3	$600 per class
Fort Bliss, Texas	240	12	$23 per hour
Fort Campbell, Kentucky	120	4	$1,130 per 6-hour session
Fort Dix, New Jersey	180	12	$39 per 4-hour session
Fort Hood, Texas	180	6	$10 per hour
Fort Knox, Kentucky	160	8	$417 per student
Fort Lewis, Washington	50	5	$45 per 2-hour session
Fort Richardson, Alaska	160	4	$15,692 per cycle

In Europe, all BSEP instruction is handled under one centralized contract 5/ providing for 60 hours of instruction, which differs from the separate contracts issued by stateside installations.

Army instructions have specified that BSEP is the "commander's primary on-duty education program" and that commanders have prerogatives concerning how the program is implemented. If the commander is for basic skills education and encourages participation, remedial programs may flourish; if the commander is against basic skills education, programs are likely to be undersupported and underutilized. In many cases, commanders have allowed soldiers to choose whether they will attend BSEP. Because of this policy, soldiers most likely to profit from remedial training may not be participating in BSEP.

At five of the eight permanent duty stations visited, we found a large gap between the number of soldiers eligible for BSEP instruction and the number that actually participated in the program during the 4th quarter of fiscal year 1981.

5/In September 1982, U.S. Army, Europe, competitively bid another centralized BSEP contract which will cost about $23 million over its 3-year life.

Installation	Number of soldiers		
	Eligible	Enrolled	Percent
Fort Benning, Georgia	2,019	506	25.1
Fort Campbell, Kentucky	3,078	810	26.3
Fort Hood, Texas	7,632	822	10.8
Fort Lewis, Washington	a/3,350	574	17.1
Fort Richardson, Alaska	1,464	301	20.6
Total	17,543	3,013	17.2

a/From June 29 to Oct. 9, 1981.

The Army was able to do slightly better at enrolling its soldiers in BSEP classes at initial entry training bases than at permanent duty stations. TRADOC reported that, from October 1978 through July 1980, 7,045 soldiers at its initial entry stations were eligible for BSEP I instruction, and 2,819 (or 40 percent) were enrolled.

The Commanding General, U.S. Army, Europe, has directed that program participation be voluntary and that commanders not be required to insure a minimum number of BSEP participants. We were told that a BSEP course is designed around 60 hours of instruction in Europe, not because this is the amount required for instruction, but because it is the maximum amount of time commanders would tolerate losing a soldier to on-duty education at one time.

Although the primary purpose of BSEP is to provide educational instruction so that soldiers can perform more effectively on the job, the curriculum consists mainly of general literacy rather than job-related subjects. The type of instruction provided sometimes gets very basic, as the following excerpt of reading materials taught to recruits at one installation illustrates.

UNIT 16

Betty Kilgore is a doctor who does not help people. Betty is a doll doctor.

Many children get dolls as presents. Sometimes the dolls get broken. Betty has learned to fix broken dolls so they look like new. She can put new hair on a doll and fix broken arms and legs. She can even paint new faces on dolls.

Betty calls her store "Betty's Doll Hospital." Everyone says that Betty is the best doll doctor in town.

UNIT 16 — QUESTIONS

1. The best title is:

   (A) A Beautiful Doll
   (B) Betty Breaks Her Leg
   (C) A Doll Doctor
   (D) Birthday Toys

2. Betty makes broken dolls look:

   (A) ugly
   (B) sad
   (C) like new
   (D) very old

3. Betty calls her store:

   (A) Betty's Toy Store
   (B) A Doll's House
   (C) Betty's Pet Hospital
   (D) Betty's Doll Hospital

4. Betty makes many children:

   (A) happy
   (B) angry
   (C) cry
   (D) work

5. In the picture, the doll has a broken:

   (A) leg
   (B) arm
   (C) back
   (D) head

In commenting on BSEP, DOD officials agreed that the program is not centralized, but they said that no single set of criteria or curricula could be mandated while still recognizing service-specific differences. These officials did not agree that cost, duration, and instructional hours ought to be standardized for all BSEP programs in all installations. They stated that commanders at each installation must retain flexibility to determine course entry procedures, instructional methodology scheduling to fit mission requirements, and other details of program micro-management. Although they said that standard guidance has or will be provided to installations, our work clearly shows that such guidance was not being followed at the locations we visited.

LACK OF PROGRAM EVALUATION

The Army does not know whether BSEP alleviates soldiers' deficiencies in basic skills because it has no monitoring system for evaluating overall program effectiveness. Army regulations require the Army Adjutant General's Office to assess BSEP effectiveness and installation commanders to keep data on the quality and effectiveness of BSEP, with a view toward analyzing the cost benefits of BSEP and making necessary changes. Because of a lack of data and inconsistent data bases, the Adjutant General's Office could not tell us how much the program has improved individual job performance.

The Army has performed limited management reviews of BSEP, but these focused on the number of enrollees in the program and changes, if any, in enrollees' grade levels, and not BSEP effectiveness. In spite of their limited research efforts, Army officials and program instructors told us that they believe the program is good for improving the morale, attitude, and motivation of soldiers.

In the fall of 1979, the Army established a separate evaluation and services division within the Education Directorate to monitor and evaluate the Army's education programs. Assessments of BSEP were just beginning at the time of our review.

BSEP SUCCESS RATES ARE LOW

Only a small number of soldiers enrolled in BSEP at initial entry training bases and permanent duty stations successfully complete the program.

TRADOC reported that, from October 1978 to July 1980, 661 out of 2,819 recruits (or 23.4 percent) who attended BSEP I raised their scores to the fifth grade level. Using 1981 and

1982 data, we substantiated these low success rates. In 1981, the Army began administering more stringent eligibility screening tests to personnel before enlistment, which resulted in fewer candidates being eligible for BSEP instruction. TRADOC reported in July 1981 that of 5,935 regular Army accessions sampled who took the screening tests, 36 (or 0.6 percent) tested below the fifth grade level--in fiscal year 1979, this had been 5.7 percent.

TRADOC recognized problems with BSEP I and a decreasing need for instruction below the fifth grade level and proposed to Army Headquarters that BSEP I be terminated effective October 1, 1981. The Army did not terminate BSEP I and left it to installation commanders to determine local need and the format of BSEP I instruction. The Army also no longer required installations to report the number of soldiers enrolled in BSEP I.

Soldiers who score below the ninth grade level in basic skills at permanent duty stations are eligible for BSEP II instruction. BSEP II comprises the majority of program enrollments, averaging about 75 percent of total enrollments for the 3 fiscal years ending September 30, 1981.

At five of the eight permanent duty stations, we found that the success rates for the 4th quarter of fiscal year 1981 were as follows:

Installation	Number of individuals enrolled	Number who successfully completed BSEP II	Percent successful
Fort Campbell, Kentucky	810	119	14.7
Fort Hood, Texas	822	105	12.8
Fort Knox, Kentucky	279	9	3.2
Fort Lewis, Washington	a/574	70	12.2
Fort Richardson, Alaska	301	60	19.9
Total	2,786	363	13.0

a/From June 29 to Oct. 9, 1981.

U.S. Army, Europe, reported that of 28,000 enrollments, 2,950 (or 11 percent) successfully completed BSEP II at 8 European locations. Our review at 6 different locations, covering over 5,000 participants, showed a 5.4-percent success rate.

DOD officials agree that BSEP success rates are low as long as "success" is defined as experiencing and maintaining an increase in reading grade level. They stated that the "remedial loop," as needed, and the integration of BSEP into initial entry and advanced skill training should improve the success rates.

DOD officials did not agree that the Army declined to terminate BSEP when proposed by TRADOC. They said the Army decided to resolve the problem by allowing commanders the flexibility to offer BSEP if it would benefit soldiers and to suspend the program if it would not.

DOD officials did not separate BSEP I from BSEP II in their comments, which is important because the problems (primarily misuse, discussed on the following pages) can, in our opinion, be attributed to having a program which is not necessary. We cannot see the need to continue to allow individuals to enlist if training cannot be successful in meeting minimum standards. This is even more significant because the problem spills over into Guard and Reserve units.

BSEP IS MISUSED

As discussed previously, the House and Senate Committees on Appropriations directed that only job-related remedial basic skills education be conducted during duty hours and that high school diploma programs be conducted only during off-duty time. We found, however, that five of the eight Army installations we visited were using BSEP to help individuals obtain high school diplomas or equivalency certificates and to increase Armed Services Vocational Aptitude Battery/General Technical scores to qualify soldiers for other Army jobs or technical training.

At one of these installations, for example, 62 out of 432 enrollees (or 14.4 percent) were at or above the ninth grade level when they enrolled in BSEP during the 4th quarter of fiscal year 1981. The enrollees' purpose was to obtain a high school equivalency certificate. At this same location, 274 out of the 432 enrollees (or 63.4 percent) entered BSEP training with Armed Services Vocational Aptitude Battery/General Technical scores already at 90 or higher, so they could increase their test scores even further to qualify for a more advanced technical school and thereby change their military occupational specialty.

Some European centers instituted a special course in BSEP II training with eligibility criteria for course enrollment set

at ninth grade level or above for entrance. The purpose was to insure that the individuals achieved at least a 10th grade level upon completion, the minimum needed before individuals would be permitted to retest on the Armed Services Vocational Aptitude Battery. Another center routinely enrolled noncommissioned officers in a special BSEP II writing class, without pretesting these individuals to determine eligibility.

CHAPTER 4

WHAT WOULD IT TAKE TO SOLVE THE ARMY'S BASIC SKILLS PROBLEM?

The Army's present program is only marginally successful in increasing soldiers' competencies in basic skills. Assuming that future research validates the fifth and ninth grade levels as appropriate, the question remains: what would it take to bring soldiers from present skill levels to those desired? Research indicates that the Army would have to devote substantial amounts of time and resources to correct its basic skills problem.

WHAT EXPERTS HAVE TO SAY ABOUT AMOUNT OF TIME AND EFFORT REQUIRED

Although we could not identify any study or expert who could provide the exact amount of time and effort needed to raise adult literacy levels, typical statements supported the fact that adult remedial programs used in DOD and in private industry are ineffective in instilling significant lasting improvements and that substantial time and resources would be required to bridge the gaps identified.

The Human Resources Research Organization, 6/ which has done considerable research in the literacy area since 1968, concluded that:

> "Since education builds knowledge, and since the building of knowledge is a growth and development process requiring time, it follows that education requires time. Hence, reading training programs in which extensive knowledge bases must be built will require considerable time. It may be unrealistic, then, to expect to find 'concentrated' reading programs (e.g., 100 to 200 hours of training in 6 to 36 weeks) that produce knowledge increments large enough to permit comprehension of the broad range and scope of written communication encountered in career education programs."

6/"Reading For Working: A Functional Literacy Anthology," Human Resources Research Organization, Alexandria, Va., 1975, p. 143.

The organization also cited similar, more generalized concerns expressed by other researchers. For example, one researcher noted [7] that " * * * * basic linguistic competence (at least with respect to grammar and vocabulary) is probably relatively unsusceptible to improvement except over long periods of time and with tremendous efforts."

Further, a literature review [8] by another researcher indicated that abnormal educational development in an individual's early years cannot be compensated for in the later years by accelerated efforts.

A research paper [9] pointed out that remedial instruction requires a great deal of time and effort before significant gains in reading ability can be achieved. Similarly, a study [10] on National Guard literacy programs concluded that short-term literacy programs are not sufficient, in and of themselves, to make major changes in the cognitive processing skills of the marginally literate adult. The study further concluded that if the Army or any other organization is intending to substantially improve personnel literacy skill levels, a program of continued, upgraded training is necessary. The study also recommended that research be done to determine the minimum amount of time to effect a 2-year gain in job reading task performance and to determine the amount of time and the type of instruction necessary to effect a gain greater than 2 years.

A 1980 Army study [11] of BSEP for initial entry soldiers found that military reading and civilian adult basic education programs by themselves usually accomplish very little and that

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[7] "Development of Native Language Skills Beyond the Early Years," in the Learning of Languages, C. E. Reed (ed.), Appleton-Century-Crafts, New York, 1971, Carroll, B., p. 13.

[8] "Stability and Change in Human Characteristics," Bloom, B. S., New York, 1964.

[9] "Tri-Service Literacy and Readability: Workshop Proceedings," Navy Personnel Research and Development Center, San Diego, Cal., Mar. 1980, p. 18.

[10] "Functional Literacy Training Program for the National Guard," Human Resources Research Organization, Alexandria, Va., Sept. 1976, p. 3.

[11] "TRADOC Evaluation - Basic Skills Education Program, Phase I, BSEP I," Headquarters Training and Doctrine Command, Fort Monroe, Va., Feb. 1980, pp. 2 and 11.

short, intensive reading courses cannot provide the competency needed to master highly technical material in many Army jobs. The study further stated that while short, intensive courses may bring a person up to prescribed grade levels, without constant reinforcement, the skills will be lost.

The Defense Audit Service [12]/ developed support for this conclusion when it retested soldiers at six Army installations. It found that 41 percent of the retested soldiers had lost at least one grade level. The Audit Service concluded that if these results were typical of Army-wide conditions, BSEP had a very low success rate.

In preparing for proceedings of the National Academy of Education in 1980, the Human Resources Research Organization [13]/ reported that adults typically only improve about one grade level in 50 to 100 hours of literacy development, and even that much gain is suspect in terms of subsequent skill retention. The organization stated that it was very difficult to teach adults who are not well-developd in basic skills. The organization concluded that it was unreasonable to expect adults who are reading at a third or fourth grade level to achieve 5 or 10 "years" of growth in reading grade levels in a 6-week or 100- to 200-hour program, which is typical of the time generally allowed for basic skills remediation in Government and industry programs. Further, in a symposium [14]/ on basic skills education in the military, a DOD official discussed the program and noted that "literacy * * * problems developed over a period of many years can hardly expect solutions in weeks or even months."

To illustrate the difficulty in raising scores, even when the weeks of instruction are increased, we tracked the progress of an individual who was enrolled in BSEP four times in a 5-week course--from February 9 through July 31, 1981--at one installation. This equated to 400 hours of English Language instruction to an individual who pretested with a score of 24. We found that, after completing training, the individual had raised his score only 16 points to 40, still 30 points below the minimum requirement.

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[12]/"Report on the Review of Installation-Sponsored Education Programs for DOD Personnel," (No. 81-041), Defense Audit Service, Jan. 15, 1981, p. 7.

[13]/"Literacy and Human Resources at Work," Human Resources Research Organization, Alexandria, Va., Working Draft, July 31, 1981, pp. 11 and 17.

[14]/"Proceedings of Division of Military Psychology Symposium: Innovations in Basic Skills Education for Military Personnel," Eighty-Eighth Annual Convention of the American Psychological Association, Sept. 1980, p. 5.

CHAPTER 5

CONCLUSIONS, RECOMMENDATIONS, AND AGENCY COMMENTS AND OUR EVALUATION

CONCLUSIONS

The Army is spending a great deal of time and money attempting to correct its basic skills problems. Yet, its basic skills program is basically ineffective in raising soldiers' skills to prescribed grade levels.

In designing the program, the Army did not identify the basic skills required for each military job. We believe blanket literacy levels for all jobs may be inappropriate since different jobs require different types and levels of basic skills.

Efforts to improve soldiers' deficiencies in basic skills were further hampered because the Army did not insure that installations were managing the program in the same manner. The outcome has been a disjointed and ineffective program that lacks overall direction and that may not be reaching those individuals who are eligible for BSEP instruction.

Also, because it lacks data, the Army does not know how effective BSEP has been. A monitoring system would enable the Army to analyze the cost benefits of BSEP and make necessary changes.

We believe that the low success rates of BSEP I and II, together with the uncertainty concerning the job relationship of the training for all participants, raise serious doubts concerning the reasonableness of continuing the current program without major changes. We also believe that the attainability of desired skills--at least within the constraints of existing time frames and funds--also is in doubt.

To prevent further unnecessary expenditures on a program achieving only limited success in closing the literacy gap, the Army needs to first determine what basic skills are necessary and then develop a program to provide training to reach those skills.

RECOMMENDATIONS

We recommend that the Secretary of the Army

--defer renewals of all contracts for basic skills education at installations until the program is revised;

--where feasible, offer basic skills education being given under current contracts only during off-duty hours;

--clearly define the specific basic skills required to do each military job; and

--determine whether the desired skills are attainable, given expected time and resource constraints and the expected reading and math skills of future Army recruits.

If the skills are attainable, the Secretary should

--develop a program which raises solidiers' basic skill levels to meet job needs;

--centralize management so that all installations are operating the program in the same manner;

--require and provide training only for those who need basic skills education to perform Army jobs; and

--establish a monitoring system to track, measure, and report program effectiveness.

AGENCY COMMENTS AND OUR EVALUATION

On April 27, 1983, we met with DOD and Army officials to discuss their comments on the draft report. The Army agreed with certain findings, conclusions and recommendations. Technical and factual corrections, as well as specific comments concerning the findings reported, have been incorporated throughout the report.

The Army did not agree with the recommendation to defer renewal of all contracts until the program is revised. (See p. 22.) The Army said that it recognized the general literacy curriculum needed to be revised and that it has been carrying out a number of efforts to change the program into a job-related, competency-based curriculum. The Army said that deferring renewal of all contracts might well stop installations' efforts to revise the program, including providing job-related basic skills instruction for two-thirds of all Army personnel. There is no evidence that efforts to revise the program would stop if contracts were not renewed. We believe that deferral should provide an even greater incentive to develop an effective program.

The Army also did not agree with our recommendation that, where feasible, it offer basic skills education under current contracts only during off-duty hours. The Army commented that its current efforts to design contracts where instruction is

to be job-related meets the Congress' requirements for on-duty training.

We agree that current efforts may meet congressional requirements but we believe that closer monitoring and evaluation is needed if the Army is to stop the misuse that has been prevalent in BSEP in recent years, and which we observed during our visits to Army installations.

The Army agreed with the remaining recommendations and provided the following actions planned to improve BSEP. On the basis of GAO's draft report, the Army's Inspector General will advise all major Army commands to:

--Monitor contract requirements of installations to insure more uniform statements of work that should result in job-related curricula and increased ability to make cost comparisons.

--Insure that installations conduct high-school completion classes and review classes for the Armed Services Vocational Aptitude Battery only during off-duty hours.

--Continue or develop initiatives to identify individuals whose participation in BSEP will be the most beneficial to the Army.

--Continue or develop initiatives to gather quantifiable data to document program effectiveness.

--Insure BSEP participation is limited to its intended purpose.

According to DOD and Army officials, the Army will:

--Continue its efforts to standardize and implement a common statement of work for BSEP contracts.

--In coordination with the Army Research Institute, revise and implement evaluation criteria that will more clearly and realistically reflect program effectiveness.

--Require major Army commands, with Army staff assistance and participation, to monitor BSEP more closely through scheduled management reviews.

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APPENDIX II

LISTING OF ARMY INSTALLATIONS VISITED BY GAO

U.S. INSTALLATIONS

Fort Benning, Georgia

Fort Bliss, Texas

Fort Campbell, Kentucky

Fort Dix, New Jersey

Fort Hood, Texas

Fort Knox, Kentucky

Fort Lewis, Washington

Fort Richardson, Alaska

EUROPEAN (WEST GERMANY) LOCATIONS

Ayers Kaserne, Giessen

Clay Kasern, Bremerhaven

Coleman Barracks, Mannheim

H. D. Smith Barracks, Baumholder

Jaeger Kaserne, Aschaffenburg

Panzer Kaserne, Stuttgart

Warner Kaserne, Bamberg

Wiesbaden Air Base, Wiesbaden

(967024)